

REMARKS¹

In the outstanding Office Action (hereinafter, "Office Action") mailed August 8, 2006, the Examiner rejected claim 9 under 35 U.S.C. § 112, second paragraph; rejected claims 1, 2, 4, and 6-9 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0065099 to Grabon et al. (hereinafter, "Grabon"); rejected claims 5, 26-28, 30, 31, and 34 under 35 U.S.C. § 103(a) as being unpatentable over Grabon in view of U.S. Patent No. 6,460,356 to Tao et al. (hereinafter, "Tao"); and objected to claims 29, 32, and 33 as being dependent on a rejected base claim, but allowable if rewritten in independent form.²

By this amendment, Applicant has amended claims 1, 9, and 26 and canceled claims 10-25. No new matter has been added. Accordingly, claims 1-9 and 26-34 remain pending.

In light of the foregoing amendments and based on the arguments presented below, Applicant respectfully traverses the rejections of the claims under 35 U.S.C. §§ 102(e), 103(a), and 112, second paragraph, and requests allowance of pending claims 1-9 and 26-34.

I. Interview Summary

Applicant acknowledges with appreciation the interview granted to Applicant's representatives on October 24, 2006, and the courtesies extended by the Examiner during the interview. At the interview, the primary issues discussed were the (1) the

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

² While the Office Action Summary indicates rejection of claim 3, the body of the Office Action contains no statements reflecting the status or basis of rejection of claim 3.

combination of the Grabon and Tao references under 35 U.S.C. § 103(a) and (2) proposed amendments to claims 1 and 26.

Applicant's representatives discussed with the Examiner the failure of the Grabon and Tao references, either alone or in combination, to satisfy the legal requirements of 35 U.S.C. § 103(a) including a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. The Examiner agreed that Grabon and Tao alone, or in combination, fail to teach or suggest the recitations of independent claim 30 to meet the requirements of 35 U.S.C. § 103(a).

In view of the discussion regarding the combination of the Grabon and Tao references under 35 U.S.C. § 103(a) as applied to independent claim 30 and the Examiner's indication that independent claim 30 is allowable in view of Grabon and Tao, Applicant's representatives proposed amendments to claims 1 and 26. The proposed amendments include: "the secondary circuit operable to selectively transfer heat between the operator cabin of the work machine and at least one of the cooling circuit and the first heat exchanger," as recited in amended independent claim 26, and "the secondary circuit operable to selectively transfer heat between at least one of the cooling circuit or the first heat exchanger and at least one of a first area or a second area," as recited in amended independent claim 1. The Examiner indicated that the proposed amendments to independent claims 1 and 26 would be considered in view of conclusions reached in the October 24 interview.

II. Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 9 was rejected under 35 U.S.C. § 112, second paragraph, for alleged indefiniteness. Applicant has amended claim 9 to recite, "input indicative of at least one of the cooling circuit operation and the secondary circuit operation." In view of this, Applicant submits that claim 9 is sufficiently clear and provides proper antecedent basis. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 9 under 35 U.S.C. § 112, second paragraph.

III. Claim Rejections Under 35 U.S.C. § 102(e)

Applicant respectfully traverses the rejection of claims 1, 2, 4, and 6-9 under 35 U.S.C. § 102(e) as being anticipated by Grabon. A proper anticipation rejection requires each and every element set forth in the claim be found, either expressly or inherently described, in a single prior art reference. See MPEP § 2131. The anticipation rejection set forth in the Office Action does not properly establish that each and every claimed element of amended claims 1, 2, 4, and 6-9 is found in Grabon.

Grabon teaches an air conditioning system which includes a plurality of heat exchangers (12, 14, 16), temperature sensors, zone controllers (18, 26, 28), and valves (20, 22, and 24). Grabon, Fig. 1. Grabon teaches that "[e]ach fan coil heat exchanger conditions air flowing through the fan coil heat exchanger" and that the "resulting conditioned air is provided to spaces to be cooled." Id. at paragraph 0011. In addition, Grabon teaches the "resulting chilled water leaves the evaporator 38 and is returned to the fan coil heat exchangers via [the] output line 40," which the Examiner has identified as a secondary circuit. Id. at paragraph 0012; Office Action, page 3.

While Grabon teaches that "[e]ach space is often referred to as a 'zone of cooling,'" Grabon does not teach or suggest, in conjunction with the other claim limitations, "the secondary circuit operable to selectively transfer heat between at least one of the cooling circuit or the first heat exchanger and at least one of a first area or a second area," as recited in independent claim 1. That is, Grabon teaches only that the output line 40 provides a means to return the chilled water leaving the evaporator to the fan coil heat exchangers. See Grabon, paragraph 0012.

Accordingly, Applicant submits that Grabon fails to teach or suggest all the elements of Applicant's amended claim 1. Independent claim 1 is therefore allowable over Grabon. In addition, dependent claims 2, 4, and 6-9 are allowable for at least the same reasons set forth above in connection with independent claim 1.

IV. Claim Rejections Under 35 U.S.C. § 103(a)

Supplemental and/or complementary to the arguments set forth in the October 24 interview, Applicant respectfully traverses the rejection of the claims under 35 U.S.C. § 103(a) because neither Grabon, nor Tao, nor combinations thereof, establish a *prima facie* case of obviousness as required under 35 U.S.C. § 103(a).

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the references, taken alone or in combination, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure." M.P.E.P. § 2143 (8th ed. 2001).

A *prima facie* case of obviousness has not been established because, among other things, the combined references, taken alone or in combination fail to teach each and every limitation found in the claims.

As discussed above, Grabon teaches an air conditioning system including a plurality of heat exchangers (12, 14, 16), temperature sensors, zone controllers (18, 26, 28), and valves (20, 22, and 24). Grabon, Fig. 1. Grabon teaches that “[e]ach fan coil heat exchanger conditions air flowing through the fan coil heat exchanger” and that the “resulting conditioned air is provided to spaces to be cooled.” Id. at paragraph 0011. In addition, Grabon teaches the “resulting chilled water leaves the evaporator 38 and is returned to the fan coil heat exchangers via [the] output line 40,” which the Examiner has identified as a secondary circuit. Id. at paragraph 0012; Office Action, page 3.

While Grabon teaches that “[e]ach space is often referred to as a ‘zone of cooling,” Grabon does not teach or suggest, in conjunction with the other claim limitations, “the secondary circuit operable to selectively transfer heat between at least one of the cooling circuit or the first heat exchanger and at least one of a first area or a second area,” as recited in independent claim 1. That is, Grabon teaches only that the output line 40 provides a means to return the chilled water leaving the evaporator to the fan coil heat exchangers. See Grabon, paragraph 0012.

As agreed in the interview, Grabon does not teach or suggest, in conjunction with the other claim limitations, “operating a secondary circuit to selectively transfer heat from at least one of an operator cabin and a sleeping cabin of the work machine to the cooled refrigerant,” as recited in claim 30. Similarly, Applicant asserts that Grabon does not teach or suggest “a secondary circuit in thermal communication with the heat

exchanger, the secondary circuit operable to selectively transfer heat between the operator cabin of the work machine and at least one of the cooling circuit and the first heat exchanger," as recited in amended claim 26.

Tao discloses an HVAC control system for a vehicle with multiple environmental zones. Tao, Abstract. Tao further discloses the system includes a data link between the control elements of the HVAC system that regulate the climate in the multiple environmental zones. Id. Tao discloses both a sleeper zone HVAC system (FIG. 3) and a cab zone HVAC system (FIG. 4). Id. at FIG. 4, FIG. 5, column 4, lines 48-67, and column 5, lines 11-30. Tao appears to disclose the sleeper zone and cab zone HVAC systems configured separately of one another. Id.

As agreed in the interview, Tao does not cure the deficiencies of Grabon set forth above, including the failure of Grabon to teach or suggest, in conjunction with the other limitations set forth in claim 30, "operating a secondary circuit to selectively transfer heat from at least one of an operator cabin and a sleeping cabin of the work machine to the cooled refrigerant."

Accordingly, Applicants submit that independent claim 30 is therefore allowable over Grabon in view of Tao. In addition, dependent claims 31-34 are allowable for at least the same reasons set forth above in connection with independent claim 30.

Applicant has amended independent claim 26 and, similar to the arguments presented above with respect to claim 30, Applicant asserts that Grabon fails to teach or suggest, *inter alia*, "a secondary circuit in thermal communication with the heat exchanger, the secondary circuit operable to selectively transfer heat between the

operator cabin and at least one of the cooling circuit and the first heat exchanger,” as recited in amended independent claim 26.

While Tao discloses both a sleeper zone HVAC system (FIG. 3) and a cab zone HVAC system (FIG. 4), Tao appears to disclose the sleeper zone and cab zone HVAC systems configured separately of one another. Tao, column 4, lines 48-67 and column 5, lines 11-30. Id. Thus, Tao does not cure the deficiencies of Grabon set forth above, including the failure of Grabon to teach or suggest, in conjunction with the other limitations set forth in claims, “the secondary circuit operable to selectively transfer heat between the operator cabin and at least one of the cooling circuit and the first heat exchanger,” as recited in amended claim 26.

Accordingly, Applicant submits that independent claim 26 is therefore allowable over Grabon in view of Tao. In addition, dependent claims 27-29 are allowable for at least the same reasons set forth above in connection with independent claim 26.

V. Conclusion

In view of the above, Applicant respectfully submits that pending claims 1-9 and 26-34 are allowable over the cited art. Accordingly, Applicant respectfully requests reconsideration and reexamination of this application and timely allowance of the pending claims.


If the Examiner believes a telephone conversation might advance prosecution,
the Examiner is invited to call Applicant's undersigned attorney at 202-408-4469.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 
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